

EXHIBIT A  
**Francis Creek Ranch Road Improvement Project**  
SCOPE OF WORK

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Implement site specific erosion control measures to protect and improve salmonid spawning and rearing habitat for Chinook and coho salmon, and steelhead trout and cutthroat trout in a selected section of Francis Creek, tributary to the Salt River in Humboldt County, California. The objective is to save approximately 9,485 cubic yards of potential sediment delivery by dispersing road runoff on approximately 1.9 miles of road, reestablishing natural drainage patterns at approximately 11 stream crossings and removing or stabilizing sediment from 60 sites along the alignment. Sediment control treatments include: stream crossing upgrades, soil excavation, rock armoring, berm removal, cross road drain installation, road outsloping and insloping, rolling dip installation, ditch cleaning, road rocking and ditch relief culvert upgrades.
2. Conduct work in Francis Creek watershed approximately 3.6 miles upstream from the confluence with Salt River near the town of Ferndale. The project is located in Township 2S, Range 2W, Sections 13, 14, and 23 of the Ferndale 7.5 Minute U.S.G.S. Quadrangle, 40.5614 N latitude and 124.2561 W longitude as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.
3. Upgrade 1.9 miles of road thereby saving 9,485 cubic yards of sediment from delivery to Francis Creek. The Grantee shall upgrade approximately 21 stream crossings, install approximately 3 ditch relief culverts, and construct approximately 12 rolling dips. The Grantee shall install rock armor 18 sites, clean and cut 3 inside ditches, correct 1 watercourse diversion, remove 1 crib wall and add 1 culvert extension, and treat 2 landslide areas. The following treatments will be implemented where appropriate:
  - Installation of culverts sized for the 100-year flood flow, including sufficient capacity for expected wood and sediment;
  - Installation of critical dips to eliminate diversion potential;
  - Installation of rock armored fill crossings or fords;
  - Excavation and/or armoring of inboard ditches;
  - Excavation of culvert inlets;
  - Installation of downspouts and/or rock dissipation at culvert outlets;
  - Construction of rock armored fords;
  - Installation of rolling dips;
  - Reshaping of road surfaces;
  - Removal of berms;
  - Installation of ditch relief culverts;
  - Rocking of road surfaces with a minimum of 6" of rock;

- Seeding and mulching of all exposed soils which may deliver sediment to a stream. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years.
4. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.
  5. The landowner must maintain road upgrading projects for a minimum of 10 years.
  6. All crossings treated in fish bearing reaches of streams will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for adult and juvenile salmonid fish passage as described in the Third Edition, Volume II, Part IX, February 2003, of the *California Salmonid Stream Habitat Restoration Manual*.
  7. Sites which are expected to erode and deliver sediment to the stream are the only locations where work will be authorized for reimbursement under the terms of this agreement. Reimbursement will not be authorized for work done to improve aesthetics only.
  8. Notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
    - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
    - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
    - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
    - The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
    - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
  9. Mulching and seeding will take place as sites are completed to avoid unforeseen erosion. Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings. The standard for success is 80% survival of plantings, after a period of three years.

10. All crossing upgrades in fish bearing reaches of streams will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for adult and juvenile salmonid fish passage as described in the Third Edition, Volume II, Part IX, February 2003, of the *California Salmonid Stream Habitat Restoration Manual*. Culvert replacement or modification designs shall be visually reviewed and authorized by NOAA Fisheries (or DFG) engineers prior to commencement of work.
11. All road upgrading will be done in accordance with techniques described in the Handbook for Forest and Ranch Roads, (PWA, 1994c.) and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part X, March 2006. All road decommissioning and upgrade sites and techniques shall be approved by the Grant Manager before any equipment work takes place.
12. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*, Flosi et al and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part XI, January 2004.
13. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.
14. If the project will not be completed by March 31, 2012, and therefore the grantee will be requesting an amendment for time, this request and a justification for the delay resulting in the time request must be submitted no later than December 1, 2011.
15. An annual report will be submitted each year, no later than December 1, detailing the work completed that field season. The annual report will include, but not necessarily be limited to the following where applicable:
  - Implementation start and end dates
  - Percentage of the project completed in total to date
  - Dewatering and fish relocation on DFG data sheet (to be provided by the DFG Grant Manager upon request)
  - Project start and end dates for work to be implemented the following season

The annual report will also include, on a site by site basis:

- Road length segment decommissioned or upgraded per road segment
- Sediment spoils volume estimate per road segment
- Upslope stream crossings decommissioned (not for fish passage)
- Stream crossings treated to improve fish passage (number)
- Stream crossing upgraded
- Stream length opened for fish passage by improving stream crossings (miles)
- Sediment volume prevented from entering the stream per crossing

- Sediment spoils volume estimate per crossing
- Upslope area treated (sq ft) (landslides, bank stabilization)
- Amount of riparian area treated per site in acres
- Number of trees planted

16. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, Microsoft Word compatible, copy on a CD. The report shall include, but not necessarily be limited to the following information:

- Grant number
- Project name
- Geographic area (e.g., watershed name)
- Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
- Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
- Project start and end dates and the number of person hours expended
- Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
- Expected benefits to anadromous salmonids from the project
- Labeled before and after photographs of any restoration activities and techniques
- Specific project access using public and private roads and trails, with landowner name and address
- Complete as built project description
- Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HU)  
(Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
  - Design spec achieved
  - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Upland Habitat Projects (HU)

- Number of actions (road decommission / upgrade)
- Total acres of upslope area treated.
- Total miles of road treated.

- Miles of road treated for road drainage system improvements.
- Miles of road decommissioned.
- Number of cubic yards of sediment saved from entering the stream.

#### Fish Passage Improvement Projects (HB)

- Miles of stream treated.
- Types of crossings treated, select from: culvert, bridge or ford.
- Miles of stream made more accessible by treating stream crossings.
- Number of road crossings removed.
- Number of barriers other than culverts treated for fish passage.
- Miles of stream made more accessible by removing barriers other than culverts.

#### Riparian Habitat Projects (HR, HS)

- Miles of stream treated overall, count stream reach only once.
- Miles of riparian stream bank treated, measure both sides of the bank.
- Total acres of riparian area treated.
- Acres of riparian area planted.
- Species scientific names of plants planted.

17. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Francis Creek Ranch Road Improvement Project.

# MAP 1

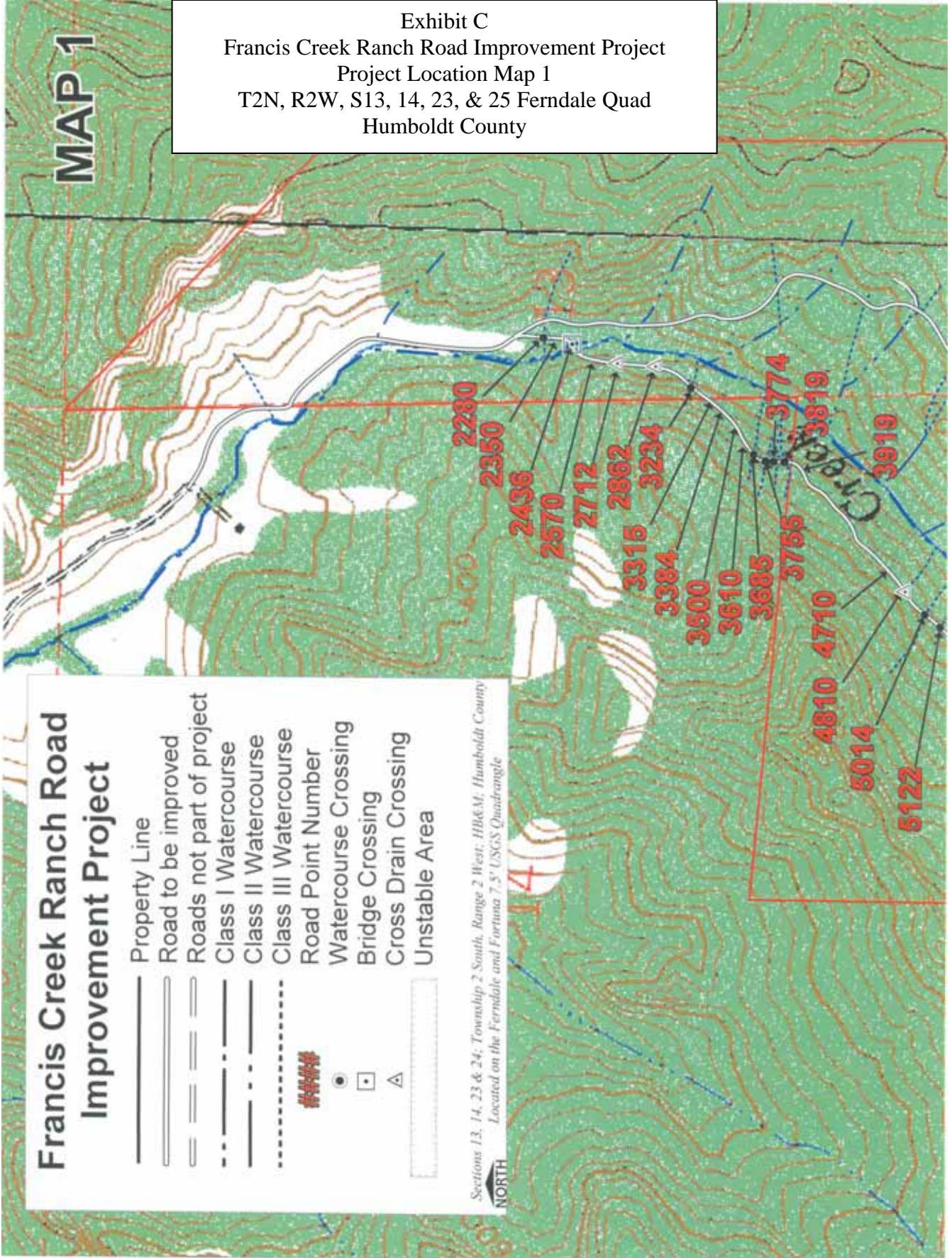
Exhibit C  
Francis Creek Ranch Road Improvement Project  
Project Location Map 1  
T2N, R2W, S13, 14, 23, & 25 Ferndale Quad  
Humboldt County

## Francis Creek Ranch Road Improvement Project

- Property Line
- Road to be improved
- Roads not part of project
- - - Class I Watercourse
- - - Class II Watercourse
- - - Class III Watercourse
- ##### Road Point Number
- Watercourse Crossing
- Bridge Crossing
- △ Cross Drain Crossing
- Unstable Area

Sections 13, 14, 23 & 24; Township 2 South, Range 2 West; HB&M; Humboldt County  
Located on the Ferndale and Fortuna 7.5' USGS Quadrangle

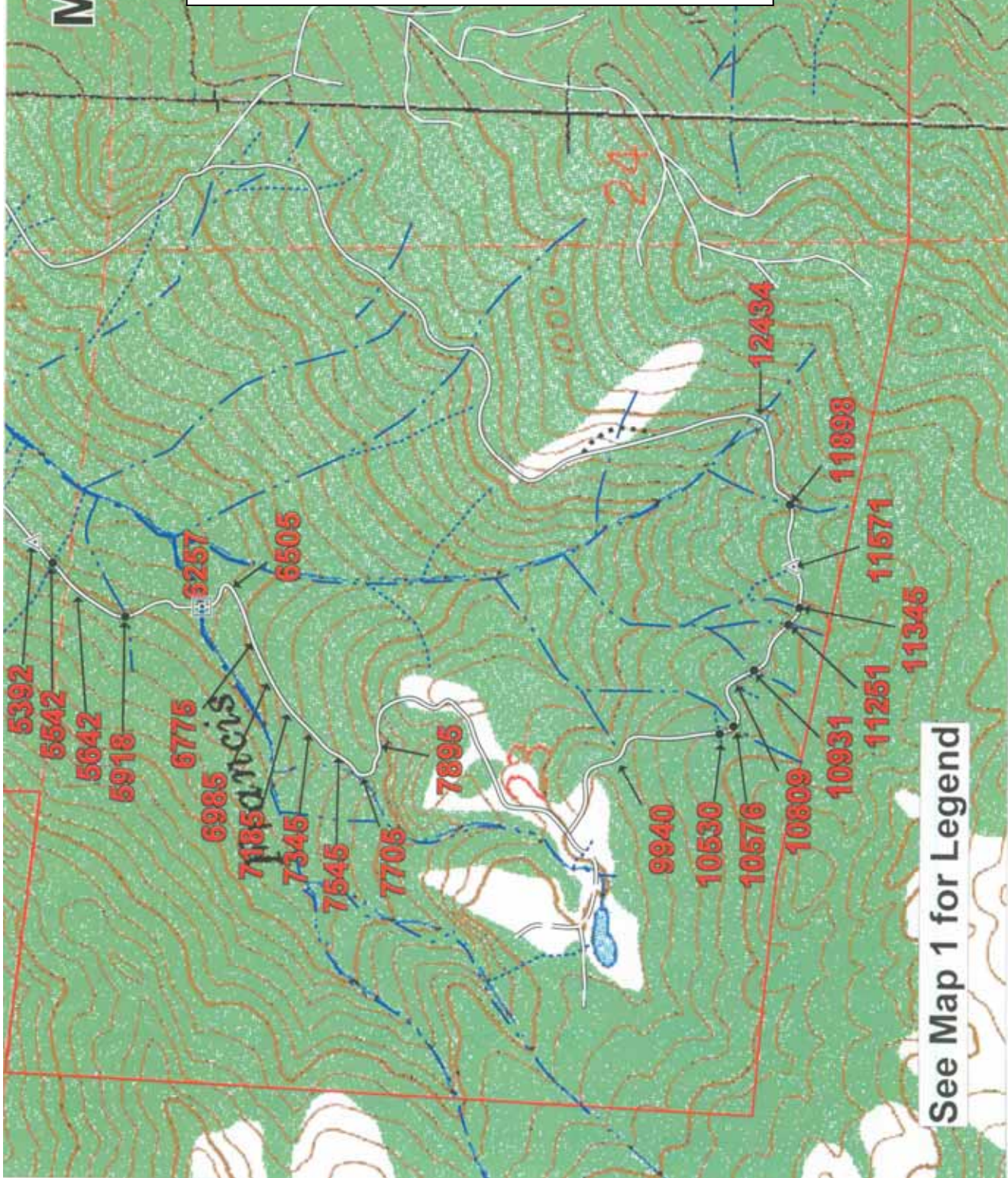
NORTH





# MAP 2

Exhibit C  
Francis Creek Ranch Road Improvement Project  
Project Location Map 2  
T2N, R2W, S13, 14, 23, & 25 Ferndale Quad  
Humboldt County



See Map 1 for Legend

California Department of Fish and Game

Natural Diversity Database

Selected Elements by Common Name - Portrait

Possible Species within the Ferndale Quad and Surrounding Quads For:

Francis Creek Ranch Road Improvement Project

T2N R2W S 13, 14, 23

United States

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 Coastal Terrace Prairie	CTT41100CA			G2	S2.1	
2 Cooper's hawk <i>Accipiter cooperii</i>	ABNKC12040			G5	S3	
3 Hitchcock's blue-eyed grass <i>Sisyrinchium hitchcockii</i>	PMIRI0D0S0			G2	S1.1	1B.1
4 Howell's montia <i>Montia howellii</i>	PDPOR05070			G3G4	S3	2.2
5 Humboldt Bay owl's-clover <i>Castilleja ambigua ssp. humboldtiensis</i>	PDSCR0D402			G4T2	S2.2	1B.2
6 Humboldt Bay wallflower <i>Erysimum menziesii ssp. eurekaense</i>	PDBRA160E2	Endangered	Endangered	G3?T1	S1.1	1B.1
7 Lyngbye's sedge <i>Carex lyngbyei</i>	PMCYP037Y0			G5	S2.2	2.2
8 Northern Coastal Salt Marsh	CTT52110CA			G3	S3.2	
9 Oregon coast paintbrush <i>Castilleja affinis ssp. litoralis</i>	PDSCR0D012			G4G5T4	S2.2	2.2
10 Oregon polemonium <i>Polemonium carneum</i>	PDPLM0E050			G4	S1	2.2
11 Pacific gilia <i>Gilia capitata ssp. pacifica</i>	PDPLM040B6			G5T3T4	S2.2?	1B.2
12 Pacific tailed frog <i>Ascaphus truei</i>	AAABA01010			G4	S2S3	SC
13 Point Reyes bird's-beak <i>Cordylanthus maritimus ssp. palustris</i>	PDSCR0J0C3			G4?T2	S2.2	1B.2
14 Siskiyou checkerbloom <i>Sidalcea malviflora ssp. patula</i>	PDMAL110F9			G5T1	S1.1	1B.2
15 Sitka Spruce Forest	CTT82110CA			G1	S1.1	
16 Sonoma tree vole <i>Arborimus pomo</i>	AMAFF23030			G3	S3	SC
17 Whitney's farewell-to-spring <i>Clarkia amoena ssp. whitneyi</i>	PDONA05025			G5T2	S2.1	1B.1
18 Wolf's evening-primrose <i>Oenothera wolfii</i>	PDONA0C1K0			G1	S1.1	1B.1
19 bald eagle <i>Haliaeetus leucocephalus</i>	ABNKC10010	Delisted	Endangered	G5	S2	
20 beach layia <i>Layia carnosa</i>	PDAST5N010	Endangered	Endangered	G2	S2.1	1B.1
21 black-crowned night heron <i>Nycticorax nycticorax</i>	ABNGA11010			G5	S3	
22 bristle-stalked sedge <i>Carex leptalea</i>	PMCYP037E0			G5	S2?	2.2
23 coast cutthroat trout <i>Oncorhynchus clarkii clarkii</i>	AFCHA0208A			G4T4	S3	SC



California Department of Fish and Game

Natural Diversity Database

Selected Elements by Common Name - Portrait

Possible Species within the Ferndale Quad and Surrounding Quads For:

Francis Creek Ranch Road Improvement Project

T2N R2W S 13, 14, 23

United States

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24 coast fawn lily <i>Erythronium revolutum</i>	PMLIL0U0F0			G4	S3	2.2
25 coast sidalcea <i>Sidalcea oregana ssp. eximia</i>	PDMAL110K9			G5T1	S1.2	1B.2
26 coastal marsh milk-vetch <i>Astragalus pycnostachyus var. pycnostachyus</i>	PDFAB0F7B2			G2T2	S2.2	1B.2
27 double-crested cormorant <i>Phalacrocorax auritus</i>	ABNFD01020			G5	S3	
28 dwarf alkali grass <i>Puccinellia pumila</i>	PMPOA531B0			G4?	S1.1?	2.2
29 foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050			G3	S2S3	SC
30 giant fawn lily <i>Erythronium oregonum</i>	PMLIL0U0C0			G5	S2.2	2.2
31 golden eagle <i>Aquila chrysaetos</i>	ABNKC22010			G5	S3	
32 great blue heron <i>Ardea herodias</i>	ABNGA04010			G5	S4	
33 great egret <i>Ardea alba</i>	ABNGA04040			G5	S4	
34 green sturgeon <i>Acipenser medirostris</i>	AFCAA01030	Threatened		G3	S1S2	SC
35 hoary bat <i>Lasiurus cinereus</i>	AMACC05030			G5	S4?	
36 long-beard lichen <i>Usnea longissima</i>	NLLEC5P420			G4	S4.2	
37 maple-leaved checkerbloom <i>Sidalcea malachroides</i>	PDMAL110E0			G3G4	S3S4.2	4.2
38 marbled murrelet <i>Brachyramphus marmoratus</i>	ABNNN06010	Threatened	Endangered	G3G4	S1	
39 marsh pea <i>Lathyrus palustris</i>	PDFAB250P0			G5	S2S3	2.2
40 northern red-legged frog <i>Rana aurora</i>	AAABH01021			G4T4	S2?	SC
41 northern spotted owl <i>Strix occidentalis caurina</i>	ABNSB12011	Threatened		G3T3	S2S3	SC
42 osprey <i>Pandion haliaetus</i>	ABNKC01010			G5	S3	
43 pallid bat <i>Antrozous pallidus</i>	AMACC10010			G5	S3	SC
44 pink sand-verbena <i>Abronia umbellata ssp. breviflora</i>	PDNYC010N2			G4G5T2	S2.1	1B.1
45 seacoast ragwort <i>Packera bolanderi var. bolanderi</i>	PDAST8H0H1			G4T4	S1.2	2.2

California Department of Fish and Game

Natural Diversity Database

Selected Elements by Common Name - Portrait

Possible Species within the Ferndale Quad and Surrounding Quads For:

Francis Creek Ranch Road Improvement Project

T2N R2W S 13, 14, 23

United States

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
46 sharp-shinned hawk <i>Accipiter striatus</i>	ABNKC12020			G5	S3	
47 short-leaved evax <i>Hesperivax sparsiflora var. brevifolia</i>	PDASTE5011			G4T2T3	S2S3	1B.2
48 slender silver moss <i>Anomobryum julaceum</i>	NBMUS80010			G4G5	S1.3	2.2
49 snowy egret <i>Egretta thula</i>	ABNGA06030			G5	S4	
50 tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered		G3	S2S3	SC
51 tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020			G2G3	S2	SC
52 tufted puffin <i>Fratercula cirrhata</i>	ABNNN12010			G5	S2	SC
53 western lily <i>Lilium occidentale</i>	PMLIL1A0G0	Endangered	Endangered	G1	S1.2	1B.1
54 western pond turtle <i>Actinemys marmorata</i>	ARAAD02030			G3G4	S3	SC
55 western sand-spurrey <i>Spergularia canadensis var. occidentalis</i>	PDCAR0W032			G5T4?	S1.1	2.1
56 western snowy plover <i>Charadrius alexandrinus nivosus</i>	ABNNB03031	Threatened		G4T3	S2	SC
57 western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	ABNRB02022	Candidate	Endangered	G5T3Q	S1	